

## East Midlands State of the Environment

### Agriculture and land management

**The East Midlands has a rich and varied landscape. Agriculture makes up around 78 per cent of the region's total land area and significant urban areas making up around three per cent. Although cities are major hubs of employment agriculture is important to the region's economy employing just under 40,000 people.**

Land use influences the landscape and can lead to a variety of environmental issues such as biodiversity loss and diffuse pollution. Diffuse pollution occurs when many small but widespread sources of pollution combine in one place at a level which causes environmental harm. For example farmers apply fertiliser and pesticide to their land. These numerous sources can then drain and run off into local watercourses where the combined effect may harm the ecology of the watercourse. Similarly in urban areas, pollutants from many sources can run off from roads, roofs and car parks and into rivers at harmful levels.

Soil is an important and often overlooked resource. It contains the nutrients vital for food production. Good soil structure is also essential to maximise productivity and is a major store of carbon. It is estimated that nationally as much as 2.2 million tonnes of soil are lost from the land each year. It is important to try and reduce soil erosion to maintain the health of our soils, to maintain the carbon storage potential and to prevent other impacts from soil erosion such as flooding and the degradation of river habitats.

The agricultural sector, like most industries, produces emissions including greenhouse gases (GHG). In the UK, agriculture accounts for about seven per cent of total greenhouse gas emissions. It occurs mainly through nitrous oxide emissions from fertiliser and livestock-related methane.

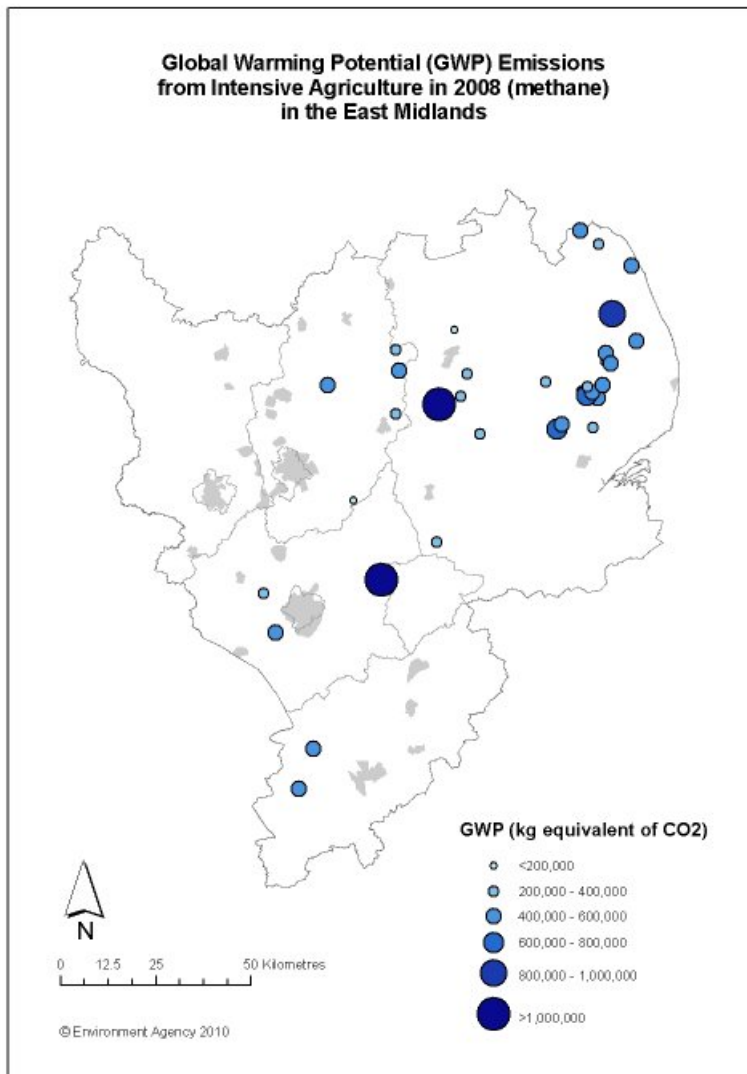
### At a glance

- Over 1.2 million hectares of land are used for agriculture with over 22,000 farms in the region; 43 per cent of these are small farms with less than five hectares of land.
- Although the number of farms in the region has risen by 4,500 between 2000 and 2008, the number of people actually employed on those farms declined.
- Farming is mixed with cereals being the main crop type but there are also around 1.2 million sheep, half a million cattle, 408,000 pigs and 23.3 million poultry on East Midlands farms.
- Lincolnshire accounts for over 85 per cent of the region's horticulture and around half of the region's arable crops and fallow area.
- Just under a third of the region's sheep and cattle are on farms in South and West Derbyshire.
- Around half of the pigs and 60 per cent of the region's poultry are farmed in Lincolnshire.

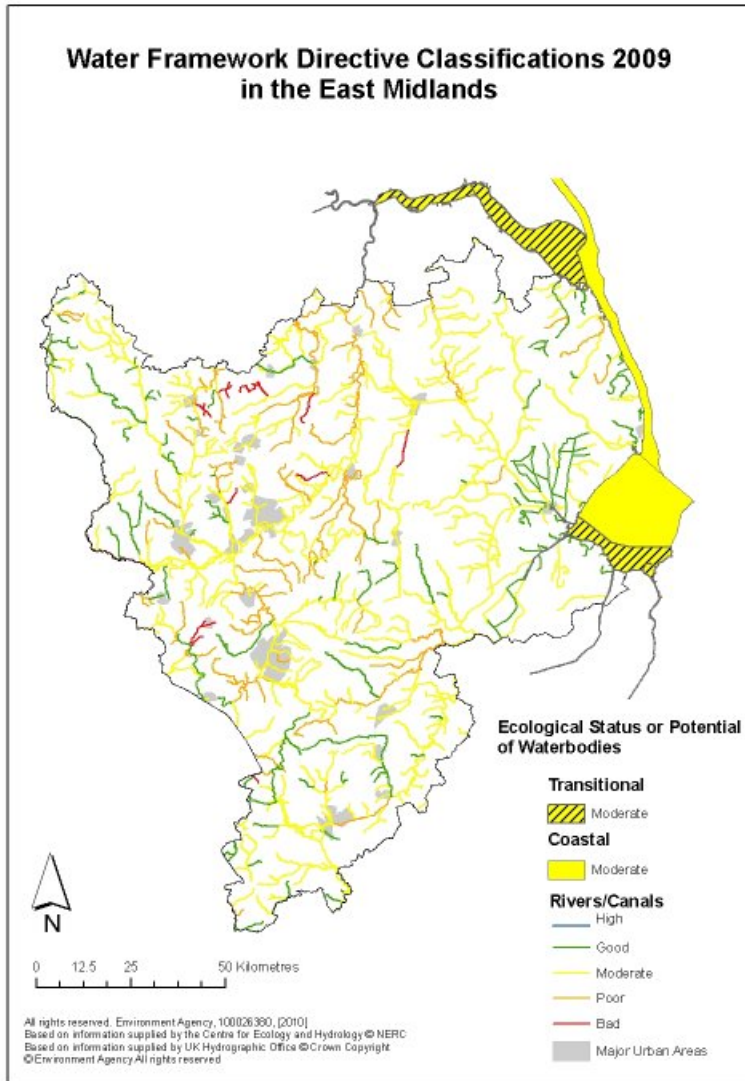
- Premises involved in intensive farming that are obliged to report their emissions emitted 17,300 tonnes of methane in the East Midlands in 2008.
- As climate change occurs extreme weather events may become more frequent bringing more flooding to the region. This could affect agricultural land in the East Midlands which is at high or moderate flood risk (18 per cent of all agricultural land).

## Data and trends

The following map shows methane emissions from agricultural sites in 2008. Intensive agriculture sites which meet a set threshold are obliged to report their estimated emissions to the Environment Agency Pollution Inventory.



Water is essential to the health and wellbeing of people and the environment. We monitor rivers, lakes, canals and groundwaters to ensure they meet the European water quality standards set out by the Water Framework Directive. The following map shows the quality of surface waters in 2009. For more information on water quality see the Water state of the environment web pages.



customer service line

08708 506 506

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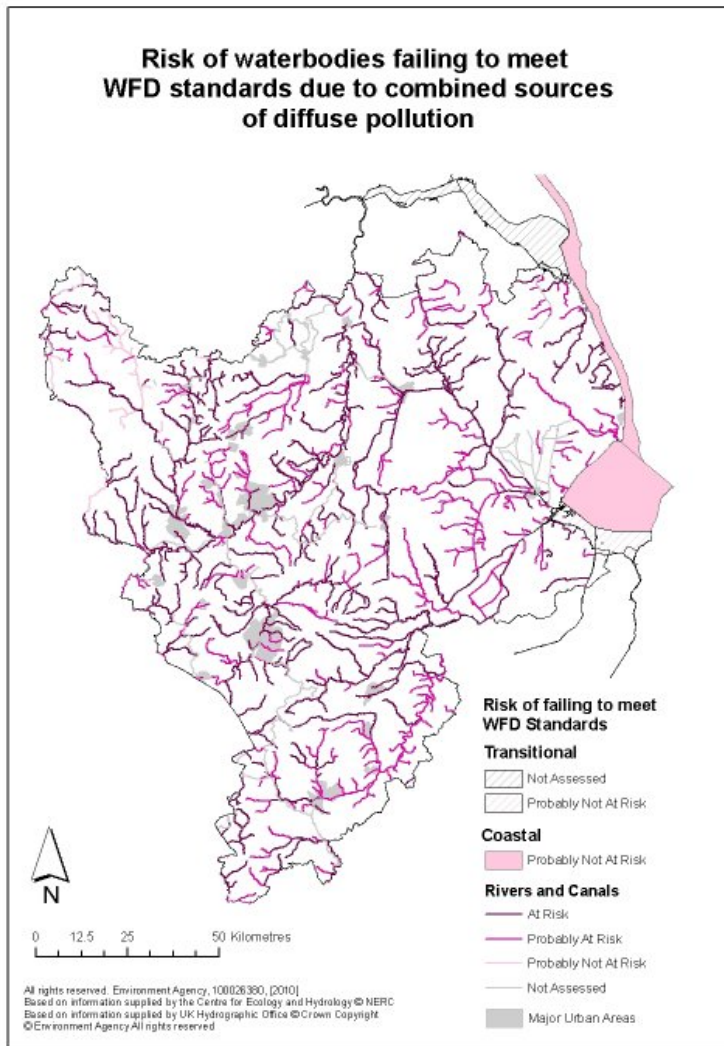
incident hotline

0800 80 70 60

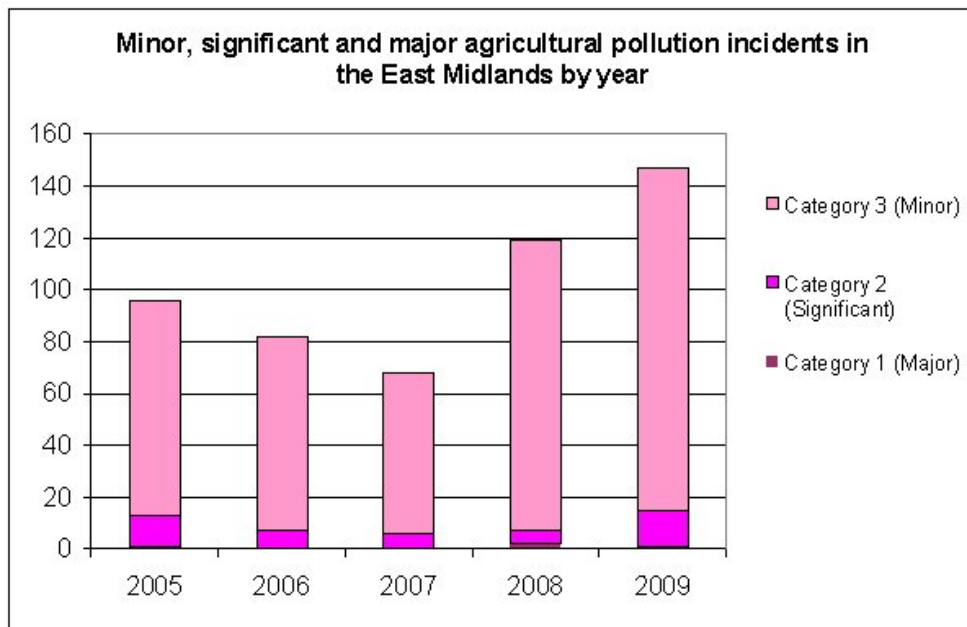
floodline

0845 988 1188

Diffuse pollution is one of the many pressures on water quality. Agricultural activity contributes to this type of pollution and the next map shows the likelihood that a given water body may fail to meet water quality standards because of diffuse pollution. We are currently working hard to ensure we understand exactly why each water body is failing to reach 'good' status and working with appropriate partners to improve the quality.



Pollution incidents are recorded onto our National Incidents Recording System. The seriousness of an incident is recorded according to its impact on the environment ranging from a major impact (category 1) to no discernable impact (category 4). The following chart shows the number of incidents (categories 1 to 3) that were attributed to the agricultural sector between 2005 and 2009.



## Our role

We have an important role as regulator and advisor to those who manage the land. In the coming years we will:

- Work with large land owners, and next generation of land managers to reduce carbon and nitrous oxide and increase their climate change resilience.
- Work with policy makers and land managers to ensure that soils are managed in a way that encourages carbon storage.
- Review and prioritise, with partners, opportunities for storing carbon in standing biomass.
- Target our agriculture and land management work to those areas where we can achieve maximum benefit for the water environment.
- Work with partners to deliver the 'Moors for the Future' project which aims to protect and restore ecologically valuable peat habitats.

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